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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

SEP 22 1997

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

In the Matter of:

Amendment of Part 25 of the Commission's Rules to Establish Rules and Policies Pertaining to the Second Processing Round of the Non-Voice, Non-Geostationary Mobile Satellite Service

IB Docket No. 96-220

JOINT PROPOSAL

E-SAT, Inc. (“E-SAT”), Final Analysis Communication Services, Inc. (“Final Analysis”), Leo One USA Corporation, (“Leo One USA”), Orbital Communications Corporation (“ORBCOMM”), and Volunteers in Technical Assistance (“VITA”), hereafter collectively referred to as the “Parties,” hereby submit for the Commission's consideration the following Joint Proposal for resolving the second processing round for the Non-Voice, Non-Geostationary Mobile Satellite Service (“NVNG MSS”).¹

The Parties request that the Commission adopt the spectrum sharing approach described herein which will avoid mutual exclusivity and permit the prompt licensing of additional NVNG MSS systems. The Parties believe the approach set forth herein will serve the public interest by

1 This processing round originally included three other applicants: GE American Communications, Inc. (“GE”), STARSYS Global Positioning, Inc. (“STARSYS”) and CTA Commercial Systems, Inc. (“CTA”). GE acquired STARSYS’ application, but subsequently withdrew both its application and the Starsys application. CTA, upon the sale of certain assets to Orbital Sciences Corporation (“Orbital”), the parent of ORBCOMM, gave Orbital an option to require the dismissal of the CTA application. In connection with this Joint Proposal, Orbital has agreed to exercise that option. Thus, the CTA application will be withdrawn, leaving only the applications of the five Parties listed above.

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expediting the licensing of additional NVNG MSS systems and by providing for a competitive marketplace and a manageable spectrum environment.

1. Spectrum Sharing Plan

A. Systems:

The FCC will create three new systems to be assigned as follows:

- System 1 - Leo One USA
- System 2 - Final Analysis
- System 3 - E-SAT

B. Spectrum Assignments:

System 1:

System 1 will operate as a FDMA/TDMA system.

<u>Uplink</u>	148.000 - 148.905 MHz	See Note 1
	148.905 - 149.810 MHz	See Note 2
	149.950 - 150.000 MHz	See Note 3
<u>Downlink</u>	400.150 - 400.505 MHz	See Note 4
	400.645 - 401.000 MHz	See Note 4
	400.505 - 400.5517 MHz	See Note 5
	400.5983 - 400.645 MHz	See Note 5
	400.5517 - 400.5983 MHz	See Note 6
	137.000 - 137.025 MHz	See Note 7

Note 1: Approximately 355 kHz of uplink spectrum will be shared with E-SAT, ORBCOMM and Final Analysis in the range 148 - 148.855 MHz subject to coordination with the French S80-1 system and E-SAT, and the preservation of approximately 500 kHz of contiguous spectrum for S80-1 and E-SAT. Final Analysis, Leo One USA and ORBCOMM, subject to coordination with E-SAT and S80-1, may also use the 148.855 - 148.905 MHz band if E-SAT does not use this band for feeder links.

- Note 2: This band (excluding the ORBCOMM feeder link at 149.585 - 149.635 MHz, unless it is vacated for feeder link use) is shared with Final Analysis and ORBCOMM subject to the use of the 148.905 - 148.955 MHz band for feeder links by the S80-1 system.
- Note 3: Subject to coordination with the Russian RNSS system.
- Note 4: These bands will be time shared with the Defense Meteorological Satellite Program system.
- Note 5: Leo One USA will be authorized to operate in these bands upon Final Analysis' surrender of its license, notification to the Commission that it is not currently using these bands or the Commission's revocation or termination of Final Analysis' license. In such event, Leo One USA will be permitted to access these bands outside of a processing round subject to the same conditions imposed upon Final Analysis' operations in the bands (including, without limitation, time-sharing with VITA).
- Note 6: If the Government of France permits access to this band, Leo One USA will be authorized to operate in this band upon Final Analysis' surrender of its license, notification to the Commission that it is not currently using this band or the Commission's revocation or termination of Final Analysis' license. In such event, Leo One USA will be permitted to access this band outside of a processing round subject to the same conditions imposed upon Final Analysis' operations in the band.
- Note 7: Use of this band is subject to coordination with the S80-1 system. Leo One USA agrees to notify the Commission within 30 days of discontinuing use of this band.

System 2:

System 2 will operate as a FDMA/TDMA system.

<u>Uplink</u>	148.000 - 148.905 MHz	See Note 8
	148.905 - 149.810 MHz	See Note 9
	150.000 - 150.050 MHz	See Note 10

Note 8: Approximately 355 kHz of uplink spectrum will be shared with E-SAT, ORBCOMM and Leo One USA in the range 148 - 148.855 MHz subject to coordination with the French S80-1 system and E-SAT, and the preservation of approximately 500 kHz of contiguous spectrum for S80-1 and E-SAT. Final Analysis, Leo One USA and ORBCOMM, subject to coordination with E-SAT and S80-1, may also use the 148.855 - 148.905 MHz band if E-SAT does not use this band for feeder links.

Note 9: This band (excluding the ORBCOMM feeder link at 149.585 - 149.635 MHz, unless it is vacated for feeder link use) is shared with Leo One USA and ORBCOMM subject to the use of the 148.905 - 148.955 MHz band for feeder links by the S80-1 system.

Note 10: Subject to coordination with the Russian RNSS system. If an additional allocation for feeder link uplink spectrum is made at WRC-97 and Final Analysis is able to transition into that new feeder link, then ORBCOMM will be able to transition its feeder link uplink into the 150.000 - 150.050 MHz band.

<u>Downlink</u>	See Note 11
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400.505 - 400.5517 MHz	See Note 12
400.5517 - 400.5983 MHz	See Note 13
400.5983 - 400.645 MHz	See Note 14
137.025 - 137.175 MHz	See Note 15
137.333 - 137.4125 MHz	See Note 15
137.475 - 137.525 MHz	See Note 15
137.595 - 137.6450 MHz	See Note 15

137.753 - 137.787 MHz	See Note 15
137.825 - 138.000 MHz	See Note 15
137.000 - 137.025 MHz	See Note 16

- Note 11: Final Analysis will be assigned up to 210 kHz, representing seven service downlinks of 30 kHz emission bandwidth each, and additional spectrum to compensate for Doppler requirements ("Supplemental Spectrum"). This Supplemental Spectrum will be assigned on a priority basis to Final Analysis outside of a processing round from spectrum allocated worldwide at WRC-97 or a subsequent WRC as needed to implement these service links as soon as possible. To the extent that, and for as long as, Final Analysis is able to operate in the 400.5517 - 400.5983 MHz band assigned to the S80-1 system, the Supplemental Spectrum will be reduced to five service downlinks of 30 kHz each totaling 150 kHz and additional spectrum to compensate for Doppler requirements.
- Note 12: This band will be time shared with the VITA satellite authorized in the first round to protect VITA's operations. Final Analysis agrees to notify the Commission within 30 days of discontinuing use of this band.
- Note 13: The FCC will initiate a communication with the Government of France requesting permission for Final Analysis to access the 400.5517 - 400.5983 MHz band until the S80-1 system launches its first satellite.
- Note 14: This band will be time shared with the VITA satellite applied for in the second round. Final Analysis agrees to notify the Commission within 30 days of discontinuing use of this band.
- Note 15: (i) Time shared use of the NOAA bands (137.025 - 137.175 MHz and 137.825 - 138.000 MHz) and the NOAA channels (137.333 - 137.367 MHz, 137.475 - 137.525 MHz, 137.595 - 137.6450 MHz and 137.753 - 137.787 MHz) in the 137 - 138 MHz band will be consistent with NOAA's implementation of the

NOAA channels; (ii) time shared use of the 137.375 - 137.4125 MHz segment of the METEOR spectrum is subject to coordination with the METEOR system; and (iii) use of 137 - 138 MHz downlink band must be coordinated with E-SAT consistent with the arrangement between GE Starsys and NOAA, with the S80-1 CDMA system, and with ORBCOMM for sharing adjacent channels.

Note 16: Final Analysis will be authorized to operate in this band upon Leo One USA's surrender of its license, notification to the Commission that it is not currently using this band or the Commission's revocation or termination of Leo One USA's license. In such event, Final Analysis will be permitted to access this band outside of a processing round.

System 3

System 3 will operate as a CDMA system.

<u>Uplink</u>	148.000 - 148.905 MHz	See Note 17
	148.855 - 148.905 MHz	See Note 18

Note 17: The use of this band will be consistent with the agreement GE-Starsys entered into with ORBCOMM and the S80-1 system. Approximately 355 kHz of uplink spectrum will be shared with Leo One USA, ORBCOMM and Final Analysis subject to coordination with the French S80-1 system and E-SAT and the preservation of approximately 500 kHz of contiguous spectrum for S80-1 and E-SAT.

Note 18: This band may be used as a feeder link subject to coordination with the S80-1 system. Final Analysis, Leo One USA and ORBCOMM, subject to coordination with E-SAT and S80-1, may also use the 148.855 - 148.905 MHz band if E-SAT does not use this band for feeder links.

<u>Downlink</u>	137.0725 - 137.9275 MHz	See Note 19
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Note 19: The use of this band will be consistent with the coordination agreements STARSYS entered into with NOAA, ORBCOMM and the S80-1 system, and will be subject to coordination with the Russian METEOR system. This band will also be shared with System 2 (Final Analysis).

ORBCOMM

ORBCOMM will operate as a FDMA/TDMA system.

<u>Uplink</u>	148.000 - 148.905 MHz	See Note 20
	148.905 - 149.810 MHz	See Note 21
	149.810 - 149.900 MHz	See Note 22
	150.000 - 150.050 MHz	See Note 23

Note 20: Approximately 355 kHz of uplink spectrum will be shared with E-SAT, Leo One USA and Final Analysis in the range 148 - 148.855 MHz subject to coordination with the French S80-1 system and E-SAT and the preservation of approximately 500 kHz of contiguous spectrum for S80-1 and E-SAT. Final Analysis, Leo One USA and ORBCOMM, subject to coordination with E-SAT and S80-1, may also use the 148.855 - 148.905 MHz band if E-SAT does not use this band for feeder links.

Note 21: This band (excluding the ORBCOMM feeder link at 149.585 - 149.635 MHz unless it is vacated for feeder link use) is shared with Final Analysis and Leo One USA subject to use of the 148.905 - 148.955 MHz band for feeder links by the S80-1 system.

Note 22: Shared with VITA.

Note 23: If an additional allocation for feeder link uplink spectrum is made at WRC-97 and Final Analysis is able to transition into that new feeder link, then ORBCOMM will be able to transition its feeder link uplink into the 150.000 - 150.050 MHz band. If ORBCOMM implements this feeder link, it must cease using the 149.585 - 149.635 MHz band as a feeder link.

<u>Downlink</u>	137.175 - 137.3275 MHz	See Note 24
	137.4225 - 137.4725 MHz	See Note 24
	137.535 - 137.585 MHz	See Note 24
	137.650 - 137.750 MHz	See Note 24
	137.7875 - 137.8125 MHz	See Note 24

Note 24: Use of portions of these frequencies is subject to FCC approval of ORBCOMM's pending modification request, and subject to coordination with the METEOR system and NOAA, and must also be coordinated with Final Analysis. This spectrum will also be shared with E-SAT.

VITA

VITA will operate as a FDMA/TDMA system.

<u>Uplink</u>	149.810 - 149.900 MHz	See Note 25
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Note 25: Shared with ORBCOMM (authorized in first processing round)

<u>Downlink</u>	400.505 - 400.5517 MHz	See Note 26
	400.5983 - 400.645 MHz	See Note 27

Note 26: Authorized in the first processing round. VITA agrees to notify the Commission within 30 days of discontinuing use of this band. Final Analysis must time share this band with VITA to protect VITA's operations.

Note 27: To be time shared between Final Analysis and the VITA satellite applied for in the second round. VITA agrees to notify the Commission within 30 days of discontinuing use of this band.

2. WRC-95 Spectrum. The Parties urge the Commission to assign, outside of a processing round, to E-SAT, Final Analysis, Leo One USA and ORBCOMM the 455 - 456 MHz and/or the

459 - 460 MHz bands to be used on a shared basis for uplinks in the event the Commission allocates this spectrum to the Non-Voice, Non-Geostationary Mobile Satellite Service.

3. Coordination

The use of these frequencies is subject to coordination among the Parties and other users. The Parties agree to conduct such coordination in good faith consistent with their obligations under Part 25 of the Commission's Rules.

4. Non-Assigned Spectrum Use

Each of the Parties agrees that it will not object to a request to the Commission by another Party seeking the right to use spectrum not assigned to it under this Joint Proposal on a temporary basis until the system that is assigned that spectrum launches its first satellite ("Non-assigned Spectrum Use"). Each of the Parties also agrees that if it engages in such Non-assigned Spectrum Use, it will promptly terminate operations in those frequencies upon notification that the system which had been assigned use of those frequencies under this Joint Proposal successfully launched its first satellite.

5. Mutual Exclusivity

The Parties acknowledge that adoption of this Joint Proposal by the FCC avoids mutual exclusivity among the Parties in this proceeding.

6. Procedures for Implementing Joint Proposal

If the FCC adopts the terms of this Joint Proposal in its Report and Order:

- A. The Parties agree to amend their applications consistent with this Joint Proposal and other technical rules adopted in the Report and Order.

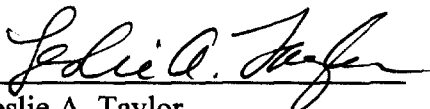
- B. The Parties hereby withdraw all petitions and objections against each other's pending applications, and waive all rights to file challenges to any amendments or requests of the Parties, filed jointly or individually, except to the extent the party is directly affected by such amendment or request.
- C. The Parties waive all rights to appeal or seek reconsideration of the Report and Order and/or any licenses issued to the Parties to the extent they are consistent with this Joint Proposal. The Parties may petition for clarification, reconsideration, and/or appeal any rule or policy the FCC adopts to the extent such petition or appeal is not inconsistent with this Joint Proposal.

7. Conclusion.

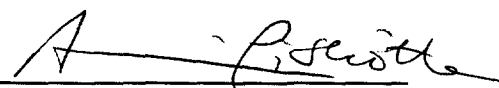
The Parties urge the Commission to adopt this Joint Proposal and to expedite issuance of second round NVNG MSS licenses.

Respectfully submitted,

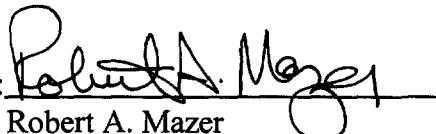
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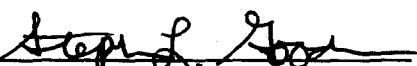
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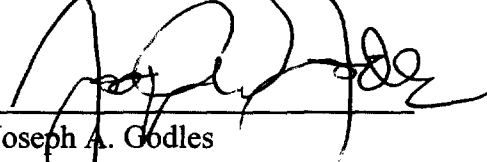
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Dated: September 19, 1997

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing Joint Proposal was sent by first-class mail, postage prepaid, this 22nd day of September, 1997, to each of the following:

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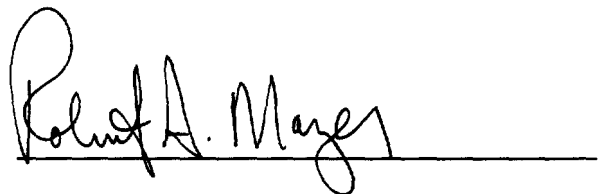
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A handwritten signature in black ink, reading "Robert A. Mayer", is written over a horizontal line.